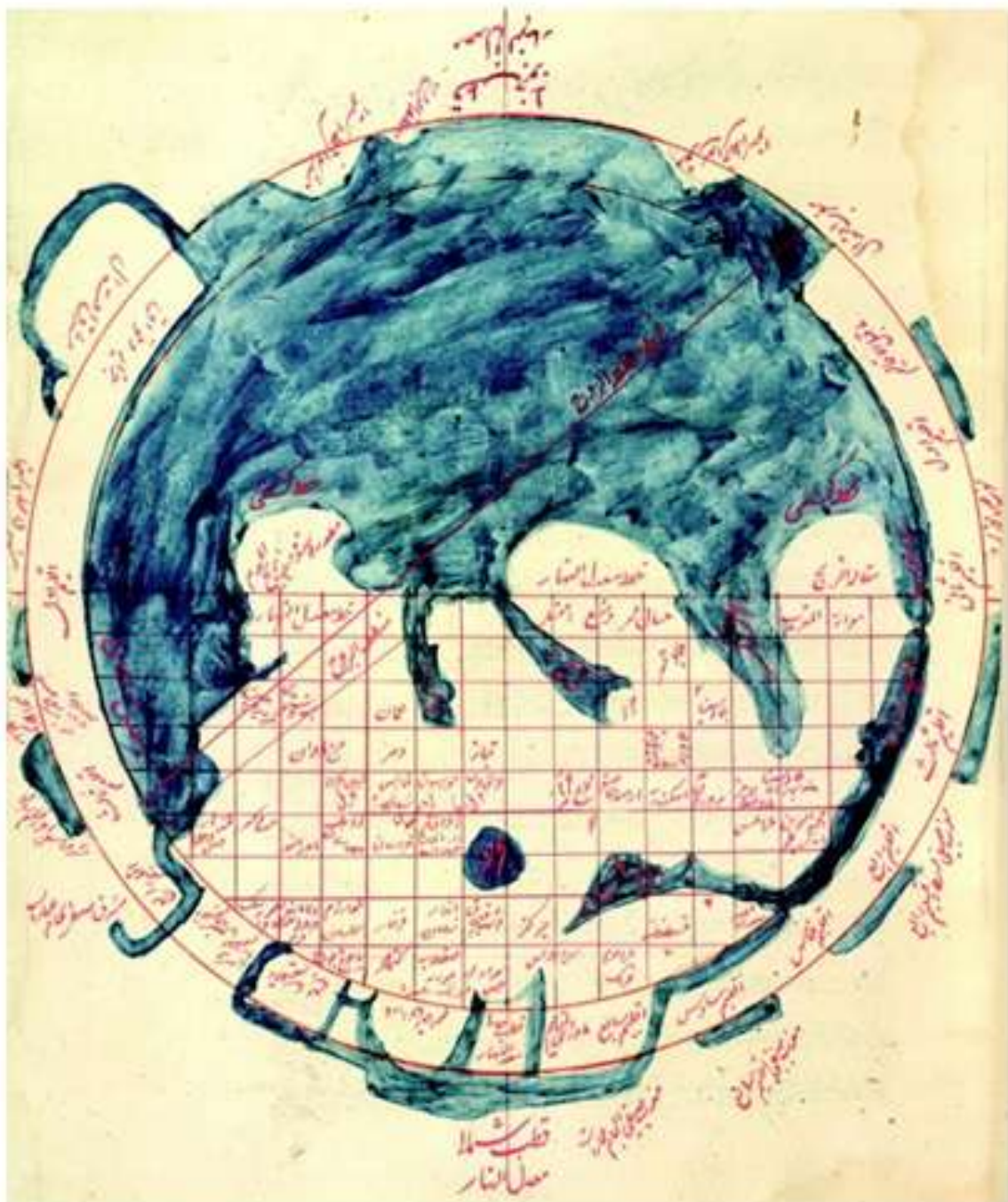


'Aj'ib al-makhlūqat

13th century

Zakariya Ibn Muhammad al-Qazwini
(1203-1283)



TITLE: *'Aj'ib al-makhluqat [The Marvels of Created Things]*

DATE: 13th century

AUTHOR: Zakariya Ibn Muhammad al-Qazwini (1203-1283)

DESCRIPTION: The following map was found in a manuscript measuring 35.6 x 22.9 cm, with 230 paper leaves, richly illuminated title-pages and numerous miniatures. On fols. 52vo-53r is a double-page circular world map with a diameter of 30.5 cm. The map depicts the Islamic world, centering upon the Indian Ocean. As in most Moslem maps, it is oriented with South at the top. The Indian Ocean is represented as enclosed by an eastern extension of Africa, a notion probably descended from Ptolemy. Near the irregular and misunderstood peninsula of India clusters a group of islands. The circular bulge represents Arabia with the twin rivers of Mesopotamia nearby illustrating a non-existent connection between the Arabian Gulf and the Mediterranean Sea. This latter sea is much constricted and distorted. It tapers sharply toward the west, where it is inscribed, *Gulf of the West*. The eastern reach of the Mediterranean is labeled *Sea of Egypt*, and into it flows the great Nile with its many-branched sources.

The map is rendered entirely in silver and gold colors, achieving a splendid decorative effect. It is possible that this reflects some prototype made upon a plaque of silver, of which several renowned Moslem examples have been recorded by medieval historians. The gold ribbons may designate the borders of the Moslem world. The red parallel lines represent the seven climatic zones, about which al-Qazwini has a great deal to say.

The author Zakariya Ibn Muhammad al-Kazwini or Qazwini (1203-1283), sometimes called the 'Moslem Pliny' and al-Mustawfi, was a Persian encyclopedist who composed in Arabic, two treatises, a cosmography, *Kitab 'aja'ib al-makhluqat wa-ghara'ib al-mawjudat* [Marvels of things created and miraculous aspects of things existing], and a geography, *Athar al-bilad* [Monuments of the lands]. The influence of his texts on later geographical writers was considerable. The maps appear in copies of both works. The former work deals with the subjects of planets, stars, angels, the elements, minerals, plants, and animals. As in the case of the encyclopedias of medieval Europe, the work is a compilation of the superficial knowledge of the day, without much attempt to interpret or integrate it with contemporary data. However, its influence was still far-reaching, and it was quoted, paraphrased and translated for centuries. The illustrations, likewise, were handed down in traditional form. Many of al-Qazwini's manuscript copies also contain a map of his native city of Qazwin, one of the ancient cities of Iran. It must however be mentioned that the maps in different manuscripts of the same work do differ from each other significantly. Transliterations of al-Qazwini's version can also be found in Konrad Miller's *Mappae arabicae*, Band 5, 129-30 (Bild 6 and 7) (note 7).

This silver and gold painted Islamic map of the world is from another copy of the Persian translation of al-Qazwini's 13th century manuscript *Athār-al Bilād wa Akhbār al Ibād* [Monuments of Places and History of God's Bondsmen] whose estimated copy date is 1580. The present map is highly ornate, detailed and covered with silver and gold leaf, gold for the mountains and silver for the seas.

Like many other maps of al-Qazwini, this too shows the seven climatic zones and indeed the emphasis of the map is on the climatic observations and related detailed descriptions. The map has South at the top. Outside the northernmost zone, below the seven habitable zones the inscription reads: *There is not enough sun and due to the cold there are no animals here*. To the south of the seven inhabited zones the inscriptions read: *There is no information about this region and due to the extreme heat there are no animals in this*

region. This is reminiscent of Macrobius' (#201) central "Torrid" or "Perusta" (parched) zone. The north polar area bears the inscription: *In this region from Aries to Libra is one day from Libra to Aries is one night.* The inscription in the South Pole reads: *From the beginning of Libra to the end of Pisces is one day and from Aries to the end of Virgo - one night.* This shows the extent of Islamic cartographers' knowledge regarding the solar day cycles, a fact not altered by the possibility that these were added to the original by copiers at a later date.



Al-Qazwini world map from his Monuments of Places, copy dated 1580, Walters Art Gallery, Baltimore, USA, Ref. W 593, ff. 52v-53r, 30.5 cm diameter.

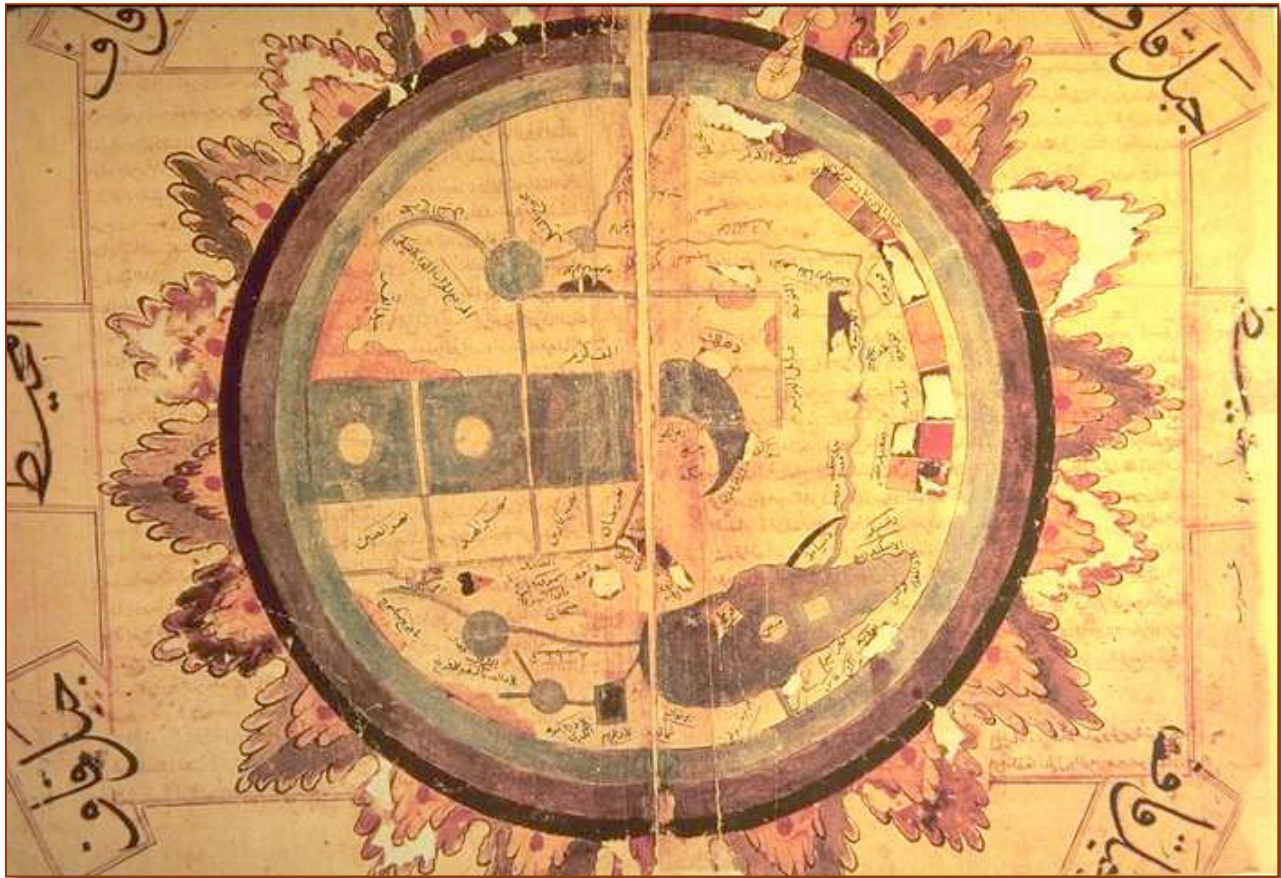
The above map indicates the extent of Islamic cartographers' knowledge regarding the solar day cycles at extreme latitudes, though there is the possibility that these legends may have been added to the 13th century original map by latter-date copiers.

Most of the map is occupied by Africa and the unknown southern lands, while Europe and Asia occupy most of the lower half at the map. The seven inscriptions in the left specify the zones and give their dimensions.

The sea to the left of the map (east) is the Pacific Ocean and the one in the top middle is the *Indian Ocean* with the *Arabian Sea*. The peninsula surrounded by six islands is China, and to its right is the *Indian Sea* [Gulf of Bengal]. The other gulf further to the right, with three rivers pouring in, is the Persian Gulf. Next is Arabia shown as a circular bulge protruding into the Indian Ocean/Arabian Sea, with *Bahr-i-Kulzum* [the Red Sea] at its west (right). The River Nile is shown with eight tributaries, which join together to flow into another lake and thence to the Mediterranean, which is the unevenly shaped sea connected at the right to the surrounding ocean and named *Bahr-i-Misr* [Sea of Egypt]. The Black Sea branches from the middle of the Mediterranean and extends northwards to join the ocean at the north of the landmass. The rivers *Dejle* [Tigris] and *Forat* [Euphrates] are shown connecting the Mediterranean Sea to the Persian Gulf. Parts of the Caspian Sea are obscured by the close binding in the centerfold of the map. The rivers Arax and Kura are also depicted joining and flowing into the Caspian, the former being connected to the River Tigris and the latter to the Black Sea. Between the Tigris and Arax rivers the inscription *Arminiya* [Armenia] can faintly be made out. Armenia is flanked by the cities of *Tabriz* and *Erzurum*. The small rectangular lake at the left (east) of the fold is the Sea of Aral, with the rivers *Jeihun* [Oxus, or Amu-Darya] and *Seihun* [Jaxartes or Sir-Darya] rising from Central Asia and flowing into it.

Another map is found also in a manuscript of al-Qazwini's '*Aja'ib al-makhlukat*. It is dated on internal evidence to the early 17th century, although as a writer al-Qazwini (died 1283) is considerably earlier than al-Harrani (fl. 1330, #214.4) or Ibn al-Wardi (died 1457, #214.1). It is difficult to know whether this al-Qazwini map is the forerunner of the Ibn al-Wardi map or a less formal version developed at a later date. All three authors were cosmological writers whose works were popular right into the Ottoman period and in India. The map from al-Qazwini's work has a flowing Nile instead of a rectangular one and a rather formless Mediterranean, though much of the rest has the geometrical stiffness of the true Ibn al-Wardi maps.

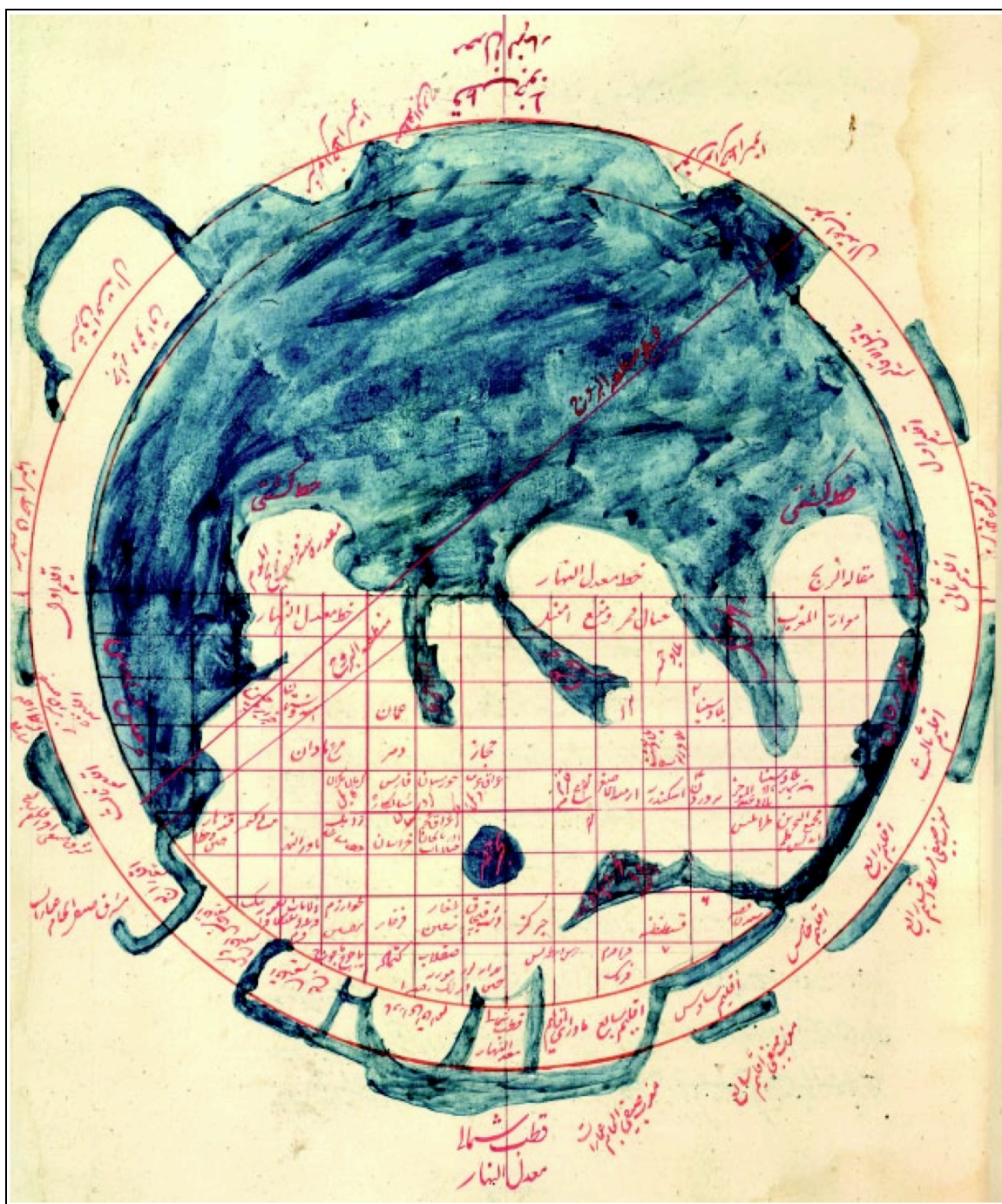
Most of the manuscripts of al-Qazwini's '*Aja'ib al-makhlukat* have a completely different map of the world. This is the third type of world map and represents al-Biruni's sketch map of the distribution of land and sea (#214.3). In al-Qazwini's texts this map tends to become stylized. The south coast of the land is stretched across the middle of the world circle and consists of a series of roughly parallel peninsulas separated by symmetrical bays. These peninsulas are China, India, Arabia, and Africa. The northern coast of the landmass follows the circle around, leaving a series of indentations where Europe and the Mediterranean are expected. The Nile appears as a wide channel dividing Africa in two, and this may be the origin of the double peninsula for southern Africa that appears in some later maps. Finally, the Caspian Sea and the Aral Sea appear as two "bubbles" in the middle of the land.



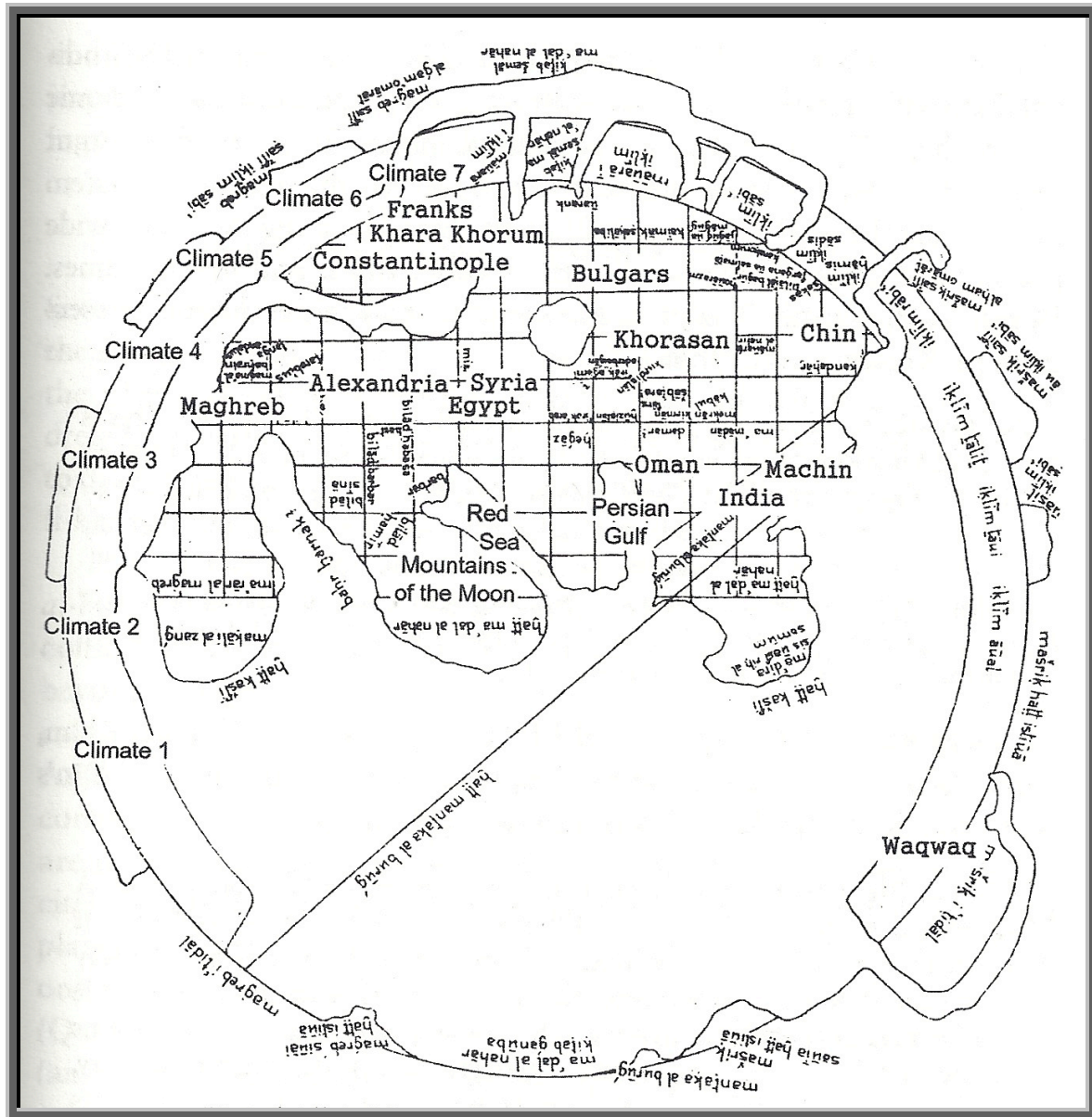
*al-Qazwini world map, 1032/1662
(oriented with South at the top)*



*al-Qazwini world map, 1340
(oriented with South at the top)*



World map of Hamd Allah Mustawfi/al-Qazwini, 1258/1330, 15.5 cm diameter oriented with South at the top 17th century copy of original dated 1339/40 CE. British Library, London. MS ADD-23544, f. 234v.



World map of Hamd Allah Mustawfi/al-Qazwini
re-oriented with North at the top and labeled

The circular map shown above is from Hamd al-Mustawfi's book *Nuzhat ul Gulub* and is kept in the British Library. The original manuscript dates from around 1339/40 CE but the copy was made only in the 17th century. The map is not typical of the Balkhi School of Islamic world maps (#214.2), but has more in common with al-Biruni's map (#214.3) in its depiction of land-sea relationship. His attempts to incorporate some sort of grid lines is another major difference.

The horizontal divisions correspond to the climatic zones, dividing the inhabited provinces into seven climates (*eghlim* - in Farsi) plus two additional zones below and above them, which are not inhabited. To these horizontal divisions some vertical lines have been added, supposedly mirroring the function of the meridians, and spaced at ten

degree intervals, but which continue running straight, extending out of the circular earth forming a grid which covers the inhabited world. It must be said that with the exception of Ptolemaic maps, the convergence of meridians in the poles appeared on medieval maps in a much later date. In the texts the names of the provinces are listed according to their appearance in the climatic zones. The numbers of the zones are also shown in the inside rim of the map, starting with before the climate zones, the width of which extends almost from the south of the Equator to the South Pole. Listed downward from the equator are zones one through seven and then finally we come to the zone beyond and the North Pole at the centre bottom centre of the page. Each division of the grid represents ten degrees of latitude and longitude.

The map is oriented with south at the top, but in the manuscript it has been drawn upside down, resulting in most of the legends also appearing inverted (rotated by 180 degrees). The reproduction shows the map in the corrected orientation, with south at the top.

The blue mass is the Indian and Pacific oceans connected to the *Sea of Maghreb* (West), depicted positioned west of Africa, with the inhabited world starting north of the Equator, from what here is called the *Temperate Line*. The two westernmost (right) landmasses protruding into the ocean represent Africa. The first landmass from the west is northwest Africa and the bay in-between the two is named *Bahri farang* a name usually given to the Mediterranean Sea, though here is the distorted representation of the Gulf of Guinea in West Africa. The next landmass to that is North Africa followed by *Bahr-i Kulzum*. This is the Arabic name given to the Red Sea, based on the name of the ancient port city of *Kulzum* on the Red Sea. To its left (east) is the Arabian Peninsula and *Bahr-i Omman*. The easternmost landmass is that of China and India. The sea extending into the land from the northwest (bottom right) is *Bahr-i Rum va Farang*, the Mediterranean, with Constantinople shown at its northern shore. The blue blob in the middle of the landmass is the Caspian Sea.

Here many other provinces and cities are mentioned such as *Iraq Arabi* and *Adharbeijan*, both southeast of the Caspian; *Khorassan*, *Fars* and *Kirman* in Iran at the southern end of the Caspian; *Bulgaria*, *Rus[sia]*, *Qipchaghs*, *Cherkez* (Circassians) and *Frank* located north and northwest of the Caspian, where the Caucasus mountains should be. The peoples of *Gog and Magog* are shown at the northeastern edge of the inhabited world, in the Sixth Climatic Zone. No other Caucasian countries are mentioned.

As described above this Hamd Allah Mustawfi world map, as discussed by Hyunhee Park in her *Mapping Chinese and Islamic Worlds*, uses a grid, although it does not display longitude and latitude. The map resembles the earlier sketch of land and sea that al-Qazwini drew in the 13th century, including its separation of Africa into two peninsulas. His division of Africa that situates the *Mountain of the Moon* (the source of the Nile) in the eastern half of the continent and the *Maghreb* (i.e., Northeast Africa) in the western half resembles the earlier anonymous map in the *Treasury of Tabriz*. At the same time, Hamd Allah Mustawfi portrays the Eurasian and African landmasses more realistically, and not simply as a diagram with fixed geographic shapes. Clearly, Hamd Allah Mustawfi attempted to represent the world in a new way, rather than simply borrow earlier ideas. Hamd Allah Mustawfi's map also differs significantly from the sketch maps of al-Qazwini and the *Treasury of Tabriz* map in its depiction of China. In fact, he does not present the country clearly at all. He confuses China (Arabic name *al-Sin*) with several places in Central Asia. Despite the fuzzy representation of China on

this map, his written survey of foreign countries provides a fuller and more complex description of China's geographic features. Hamd Allah Mustawfi consulted earlier Arabic geographers like Ibn Khurdadhbih in researching his treatise; however, he also adds unprecedented information about countries based on Persian sources. For example, he divides China politically into *Chin*, *Khitay*, and *Machin* – the same divisions that Rashid al-Din used in his *Compendium of Chronicles*.

Hamd Allah Mustawfi sets himself apart from his predecessors by dividing foreign countries into two categories: Those that have close relation with the Il-khanate and those that were situated far from the Islamic world and were not built by Mongol governors. Curiously, he places all three regions of China in the second category. Hamd Allah Mustawfi's account of China contains both old and new information. For example, in his description about *Chin* [North China formerly under Jurchen rule], he accurately says that the Mongols designated this land as Manzi at that time. The claims in this passage – that the majority of the population worshiped idols, that all arts and crafts had reached perfection, and that numerous great cities flourished throughout the land – mostly constitute the recycling of earlier accounts of China and present the same stereotypes of China and the Chinese that appear in earlier Muslim accounts. Interestingly, Marco Polo makes similar points in his account of China.

That said, Hamd Allah Mustawfi's plausible longitudinal and latitudinal figures distinguish his geography from previous generations of Islamic geographers. This is evident in the passage about the capital of *Chin* at 125°/22°. Interestingly, the treatise also follows the traditional system of grouping the world into seven different climes, locating the broad wide kingdom of *Chin* stretching over the second, third, and fourth climes. Hamd Allah Mustawfi applied the same method in developing his sections on *Khitay* and *Machin*:

Khitay [Khitai (Cathay), North China formerly under Khitan rule]. This is a great kingdom of the Fourth and Fifth Climes. Its capital is Khan Baligh [Khanbaligh] in the Fifth Clime, whose longitude is 124°, and latitude 37°. This is a mighty city, and it was called originally Changda; and Qubilay Khan built another city outside the same. Of other great towns and well-known districts are the following: Nanking [Nanjing], where a great river runs through the city, Tabaksik [?], Qal'ah Shikat [?], and Almaska [?]. Further, and besides there are many others.

His description of *Khitay's* capital *Khan Baligh*, built by Khubilai Khan, certainly utilizes updated information, most likely from Rashid al-Din's work. The same applies to his description of *Machin*:

Machin [the part of South China that was under southern Song rule]. A great and extensive kingdom that the Mongols know as Nankiyas. It is of the First and Second Climes, and its capital is the city of Khansay [Hangzhou], which some call Siyahan. They say that in all the habitable world there is no greater city than this, or at any rate that in the regions of the east there is no larger town. There is a lake in the midst of the city, six leagues in circumference, and the houses of the town stand round its borders....

Hamd Allah Mustawfi's image of *Machin* as a great and extensive kingdom and its Mongol name *Nankiyas* match the account of Rashid al-Din. His description of its capital *Khansay* as the largest city in the world with a large lake in the middle and a great population echoes the account by Marco Polo, who stated that "it is without doubt the finest and most splendid city in the world." He continues describing *Khansay's* warm climate and abundant sugarcane and rice crop production, the city's great population

that extends upwards of 10,000, and its political situation in which a few Muslims hold power over the many non-Muslim Chinese.

These sources show that Muslims living in the Il-khanate in Iran made quite significant advancements in the development of geography and cartography of the world during the Mongol period.

This map is in the British Museum. In Gunnar Thompson's book *The Friar's Map* (1996), p. 174 he describes the following theory: "The map has a long peninsula east of Asia across the Indian Ocean (Pacific Ocean) that seems to correspond to Ptolemy's *Cattigara* Peninsula (a.k.a. the *Tiger Leg*) across the *Sinus Magnus* or Great Gulf that Magellan identified as the Pacific Ocean. This peninsula is called *Waq Waq* on this map. On many other maps, this designation has been used for South Africa, however not on Mustawfi al-Qazwini. Thompson showed this map to Professor Fazi Khoury of the Far Eastern Studies Department at the University of Washington in Seattle, and he said: "This is conclusive proof that the Muslims discovered America. All the history books will have to be rewritten." Geographical names on the map were translated by the Seattle Arabic Language Service:

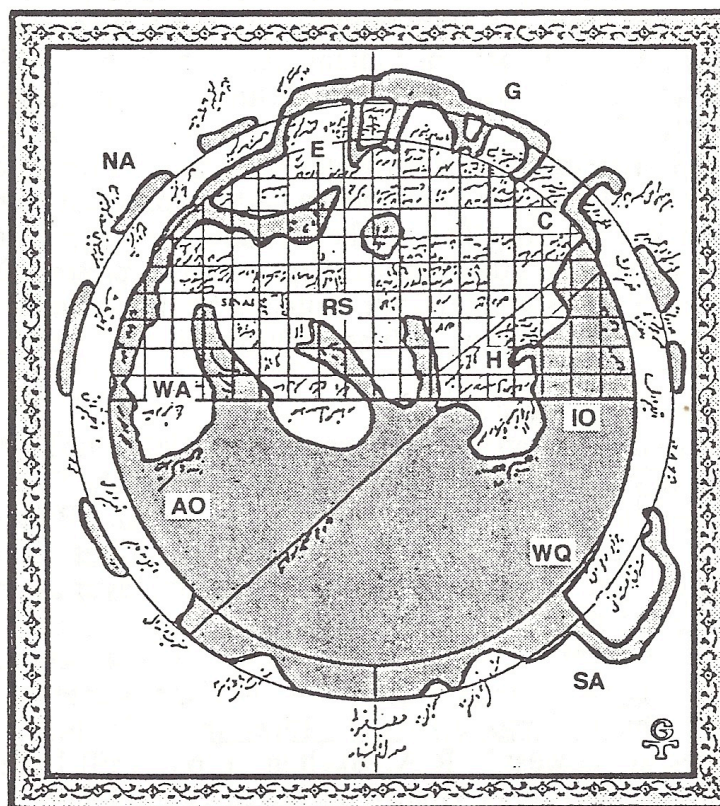
KEY:

AO = Atlantic Ocean; C = China or Sin; E = Europe; G = Greenland; H = India or Hind; IO = Indian Ocean; NA = North America; RS = Red Sea; SA = South America; WA = West Africa; WQ = Waq Waq.



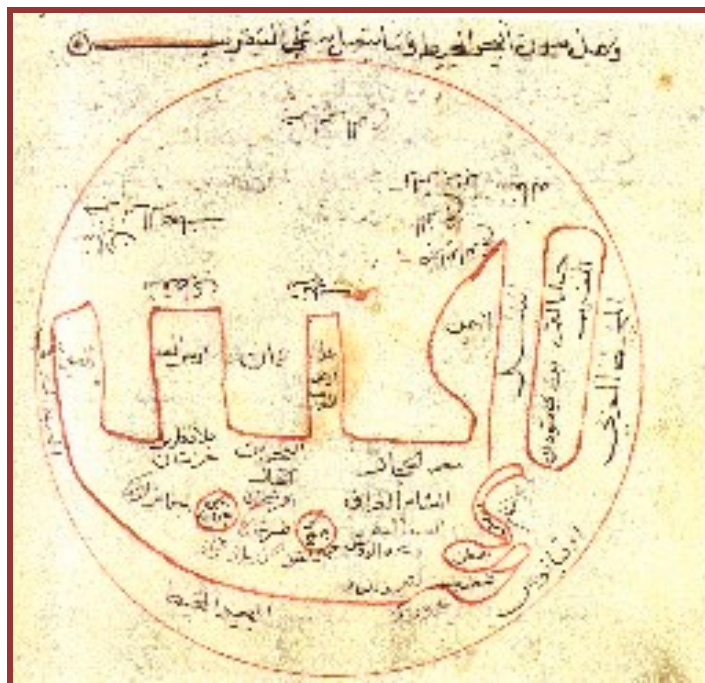
Hamd Allah Mustawfi World Map 1350 AD

American continents are portrayed schematically on this map by Persian cartographer Mustawfi. They are shown as a ring of land surrounding Africa and Eurasia. Waq-Waq (WQ) in the southeast probably represents South America.

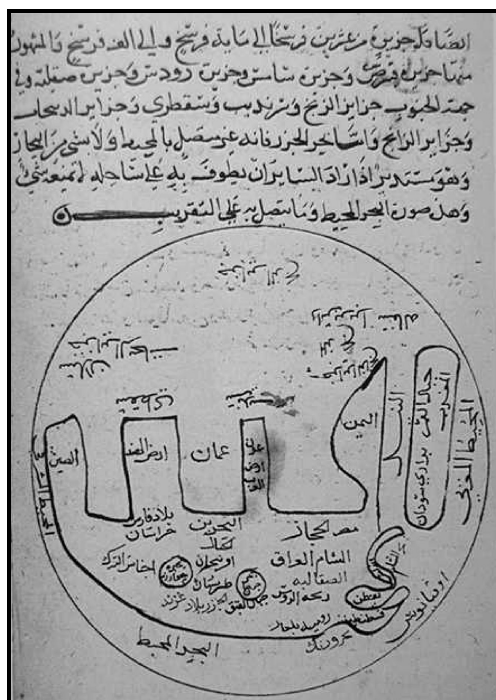


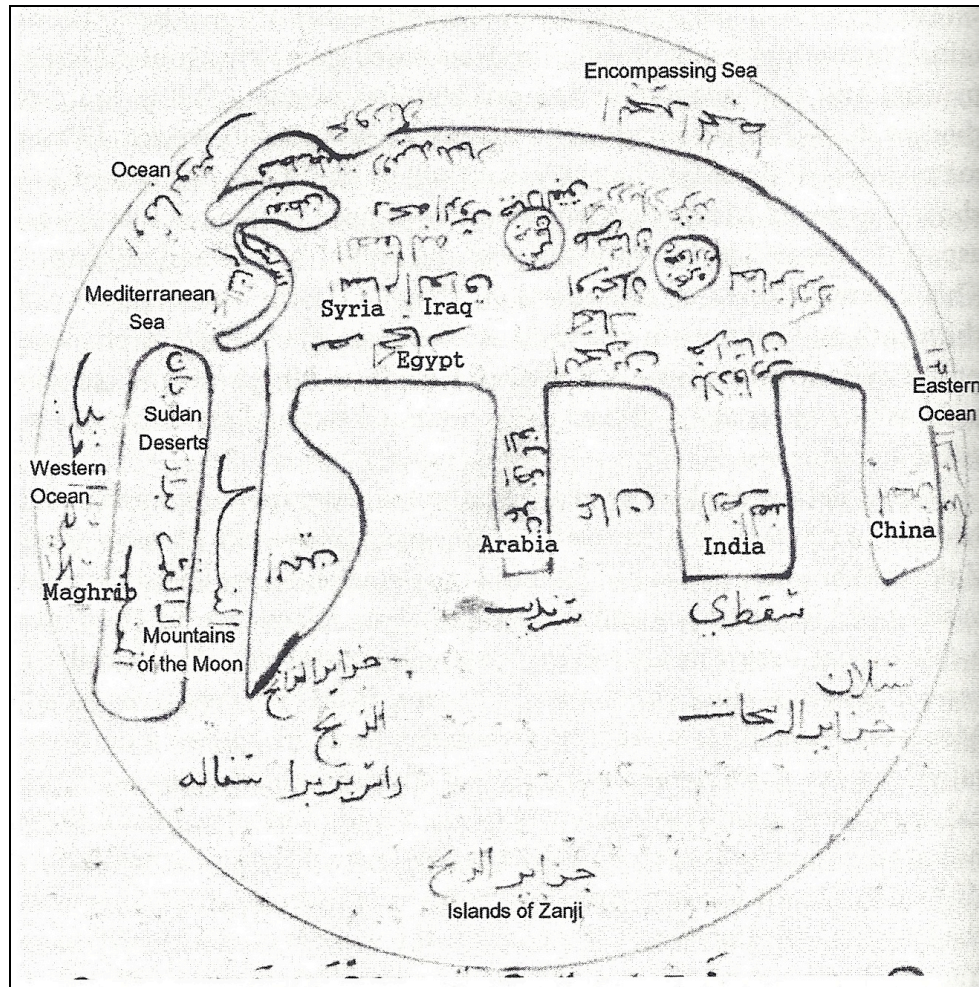
Based on a 17th-century manuscript copy in Munis' *Atlas Terrestrial* (1987).
The map is presently in the British Museum Library in London. 13 M2

Translation with assistance from Professor Fazi Khoury, Far Eastern Studies,
University of Washington, and Afili Durr, Seattle Arabic Language Service.



Bodleian Library, Oxford MS. Pococke 350, fol. 73v





Al-Qazwini's sketch of the distribution of land and sea from his Marvels of Things Created and Miraculous Aspects of Things, Re-oriented with North at the top with place-names.

The earliest example of scholars who wrote geographic accounts under Mongol patronage, the famous Iranian geographer and cosmographer Zakariya' b. Muhammad al-Qazwini, exemplifies this innovative trend in geography and cartography in the Islamic world. Born into a family that settled in Qazvin in Persia, al-Qazwini served politically in several localities throughout the Il-khanate, including Persia, Baghdad, Mesopotamia, and Syria. After his retirement, he wrote his two monumental works, one geographical and the other cosmographical. His geographical dictionary, entitled *Athar al-bilad* [Monuments of the Lands], drew heavily on Yaqut's *Geographical Dictionary*, written earlier in the century. Al-Qazwini innovatively rearranged Yaqut's rubrics from seven climates to the letters of the alphabet. Nonetheless, the work borrows heavily from Yaqut. Most importantly, however, al-Qazwini's *Geographical Dictionary* provides clear evidence that Arabic geographic traditions continued to influence academic circles in the Islamic world under Mongol-rule profoundly.

A map sketch of the world found in al-Qazwini's famous '*Ajdib al-makhlriqat wa-ghardib al-mawji-idat* [Marvels of Things Created and Miraculous Aspects of Things Existing] also reveals the continued influence of the earlier Arabic

geographic tradition in the lands of the Islamic world under Mongol rule. Written in Arabic, this treatise has unique significance as the first Muslim cosmography. While it concentrates mainly on supra-terrestrial matters like angels, the second part of al-Qazwini's book describes the division of the earth into seven climates and charts the world's known seas and rivers. His description of China contains no new information and simply describes the country as a large territory with many people and resources. Yet the attached sketch showing the distribution of land and water in the world is noteworthy because of its unique portrayal of China and Africa.

This sketch map by al-Qazwini was obviously influenced by that of al-Biruni from the 11th century (#214.3). The two maps differ, however. Al-Qazwini's map portrays China as a major subcontinent at the eastern edge of the northern hemisphere; that is, as an important and large region as big as India and the Arabian world. It continues to depict Africa as a continent in shape but cleaves Africa into two halves divided by the Nile River. In fact, al-Biruni was the first geographer who argued that the Indian Ocean must be connected to the Atlantic through waters that ran south of the *Mountains of the Moon*, the legendary sources of the Nile. It is likely that al-Qazwini, who was influenced by al-Biruni when drawing this sketch, applied al-Biruni's theory faithfully. This trend was imitated by many later cartographers in various ways.

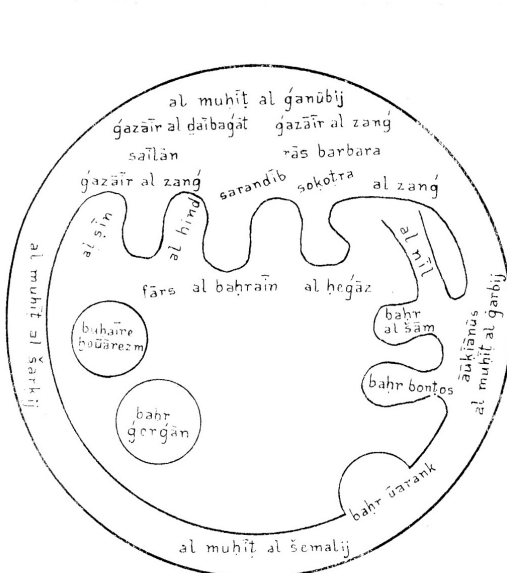
What new sources did al-Qazwini use to write his geographic studies including the sketch map? The scholar dedicated *Marvels of Things Created* to the governor of Baghdad, Juwayni, who authored *History of the World-Conqueror*, a chronicle of Chinggis Khan. Thus, al-Qazwini perhaps wrote his studies in an academic circle patronized by Juwayni. The Baghdad governor's *History* provides important information about the political developments surrounding the Mongol conquest in Persia and elsewhere. Al-Qazwini probably received some information or ideas about China from his patron, who had access to up-to-date information about eastern Asia. Juwayni learned about the Mongols in the course of serving them, in addition to gaining knowledge about the Qara-Khitai in Central Asia and the Uighurs further east. The scholarly governor probably continued to amass more information about the wider world and this influenced other scholars in the Il-khanate like al-Qazwini.

The accumulation of knowledge among Muslim scholars culminated in a work that was written at the apogee of Mongol dominion over Eurasia and deeply influenced Muslim thinking about the world. The *Compendium of Chronicles*, written first in Persian and immediately translated into Arabic, was compiled in 1308 by Rashid al-Din (1247–1318), the son of a Jewish apothecary family who converted to Islam during his early adolescence. He rose to prominence in the court of the seventh Il-khanate ruler Ghazan Khan, and eventually served as prime minister where he became well known for his many economic reforms. Perhaps in gratitude, Ghazan Khan gave Rashid al-Din a special commission to write this monumental work. This work initiated a new genre of writing in Muslim scholarship, one that covers the historical developments of the world's diverse societies in unified fashion and chronological order. Rashid al-Din originally sought to write a history of the Il-khanate in order to commemorate the origins, history and achievements of the Mongols. However, Ghazan died just before the book's completion and his successor Oljeitü (reigned 1304-1316) took over sponsorship of the project and broadened its scope to embrace a history of the entire world.

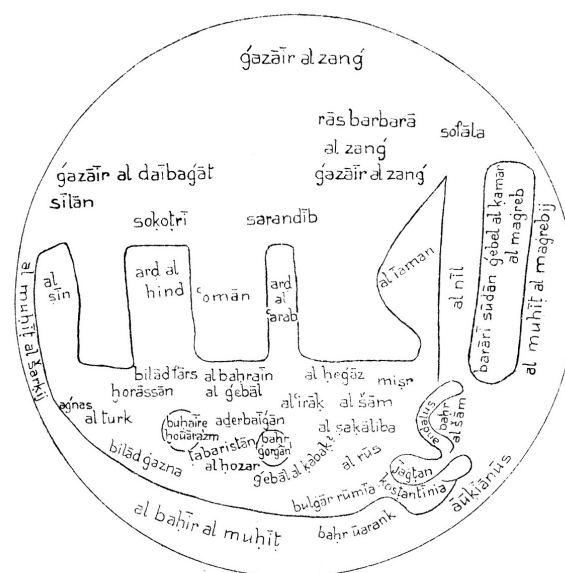
LOCATIONS: Walters Art Gallery, fols. 52vo-53r
 Forschungs-bibliothek, Gotha, MS. Orient A. 1507, fols. 95b-96a
 Boleian Library, MS. Pococke 350, fol. 73v, Oxford
 University of Manchester Library, UK Arabic MS 313[668] iv
 U.S. National Library of Medicine. MS P 1, fols. 71b-72a
 British Library, London, MS. Or. MS 3623, f. 5a
 University of Manchester Library, UK, Rylands Collection, Persian MS 403, 199v

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- *illustrated



Kazwini's Karte der 7 Meere nach Wüstenfeld.



Kazwini's Karte der 7 Meere nach Oxford Bodl.

Reproduction of Qazwini world maps from Konrad Miller



World map in the ca. 1553 manuscript of al-Qazwini showing the New World (right side) similar to the 1507 representation by Waldseemüller (Book IV, #310). Oriented with South at the top.



World Map in 1565 Persian manuscript of al-Qazwini's Wonders of Creation





al-Qazwini world map from 1325



alQazwini world map





A map of the inhabited world, from 'Aja'ib al-makhlūqāt wa-gharā'ib al-mawjūdāt [Marvels of Things Created and Miraculous Aspects of Things Existing] by al-Qazwīnī
U.S. National Library of Medicine. MS P 1, fols. 71b-72a. The copy was made in 1537/944,
probably in western India. Neither the copyist nor illustrator is named.

The map shown below is one of al-Qazwini's maps from the *Monuments of Places*. It is oriented with South at the top and is very basic, omitting even the oceans and landmasses. The map is typical Islamic, with the inhabited world divided into seven climatic zones, from south to north. The inhabited world is located between the Equator and the North Polar Zone. The first zone is near the equator and the region near the North Pole above the seventh zone is the Northern uninhabited zone.

The seven parallel climatic zone lines dominate the map, with the gulfs represented by wedge-like shapes, cutting into the climatic zones. These wedges are named (from the left) the Ahdar Gulf, the Persian Gulf and the Gulf of the Berbers. The circle in the middle is the Caspian Sea and the two slanted parallel lines to its right are inscribed *Bahr-ul Maghrib wa al-Rum wa al-Sham* [the Sea of the West, Rome and the Sham] – i.e., the Mediterranean Sea.

The countries shown on the map are predominantly Islamic ones, but some non-Islamic countries such as *Rum* [Byzantium], *Bulgaria*, *Saqaliba* [the Slavs] and *Rus* [Russia] are also featured. Armenia also appears in the neighborhood of the Caspian Sea and Russia. The legends inside the zones from one to seven (top to bottom) from the right include:

- Zone 1 *Khalij Berber* [Gulf of Berbers], *Yemen*, *Omman*, *Khalij Fars* [Persian Gulf], *Khalij Akhdar* [the Green gulf, possibly Gulf of Bengal], *al-Chin*.
- Zone 2 *Tanjeh* [Tangiers], *Bilad Berber*, *Lesser Egypt*, *Hijaz*, *al-Sir*

Zone 3 Andalus, Bilad Afriqiye, Iskandariyah [Alexandria], Beyt ul-Muqaddas [Jerusalem], Shiraz, Kirman, Mokran, Sind, Hind, Kandahar, Machin.

Zone 4 Bahr el-Rum va al-Sham [Mediterranean], Diarbekir, Iraq, Djebal,

Khurassan, Shaja, Badakhshan, Atachin, Tlbbet

Zone 5 Afranje [France], Qostantanieh [Constantinople], Bahri Khazar [Caspian], Rus, Armin[rya], Khawrazm, Bein ul-Nahrein [Oxiana], Sadd-Taran (?), al-Turk [the Turks].

Zone 6 Bilad Alman [Germany], Saqaliba, Rus, Bahri Khawrazm [Aral Sea], Qipchagh [Polovtsians], Bamian, Kaimaii

Zone 7 Maghrib, Batin ul-Rum [Byzantium interior], Bulghar, Bahri Warang [Baltic or Northern Sea], Gog and Magog.

Outside the climatic zones, in the southern hemisphere (upper part) there are a few provinces listed, including *Sauad al-Maghbb* [Black races of the West], *Habash* [Ethiopia], *Zangebar* [Zanzibar] *Nubia and Al-Zinj* [East Africa, could also refer to the city of Zinj in Bahrain]. The vertical legend in the center of the map indicates the Equator.



Al-Qazwini zonal world map from his *Athar-al Bilad wa Akhbar al Ibad*, 1329, British Library, London, MS. Or. MS 3623, f. 5a (water damaged), Size 23 x 35 cm.



Al-Qazwini world map from his "Marvels of Regions", 1582,
 University of Manchester Library, UK Arabic MS 313[668] iv, 226 x 135 mm
 The mountain called "mountain of the moon", and the sources of the Nile are the extreme south;
 the Russians and Bulgarians, Constantinople, and Gog and Magog the extreme North



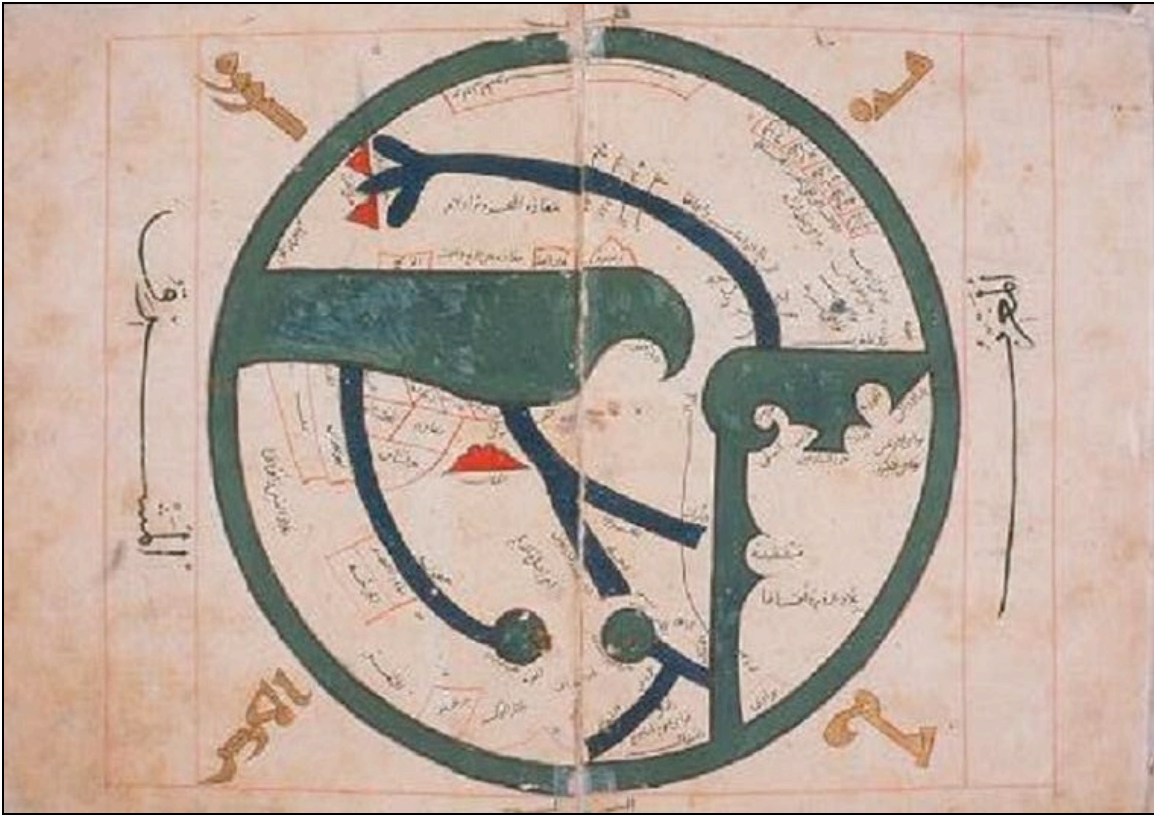
Al-Qazwini world map from his *Cosmography "Delight of Hearts"*, 1619, 247 x 145 mm, University of Manchester Library, UK, Rylands Collection, Persian MS 403, 199v



Map of the World, 15th century, 18.1 x 10 cm, The Museum of Islamic Art, Qatar, Ms 228.1998
oriented with South at the top

واورا بسام از زمین خوانند کی برب او باشند و لکن خزر معروف
 و بیشبندان او را بکرکان دانستند کی بطلمیوس او را دریا
 ارقایا خواند و هیچ دریا بیوندند و اندر معمره بطیاح و آب
 کبریا و بسپارست و کادکاه برخی را از آن دریا خوانند
 جوز دریا اک آفامیه و از طبریه و از عرجه شام و
 دریا اک خوارزم و ایستکول نزدیک بخان و این صورت نیست نه دریا

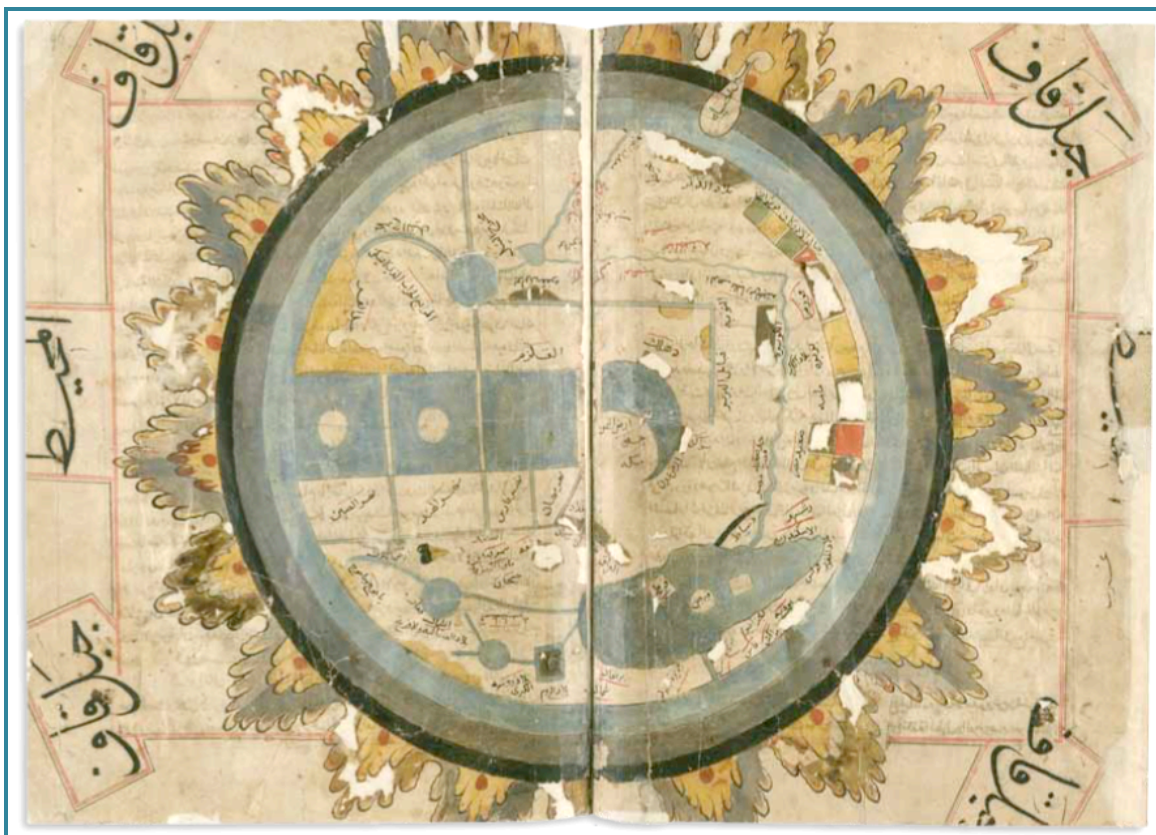




A map by Abu Zaid Ahmed ibn Sahl al-Balkhi (850-934), a Persian geographer who was a disciple of al-Kindi and also the founder of the "Balkhī school" of terrestrial mapping in Baghdad.



An al-Qazwini world map based upon the al-Biruni model, ca. 14th century, 16.75 cm diameter
 Institute of Oriental Manuscripts, Russian Academy of Sciences, Ms E7, fol. 63b, St. Petersburg



World map of al-Qazwini from his book '*Ajdib al-makhlriqat wa-ghardib al-mawji-idat* [Marvels of Things Created and Miraculous Aspects of Things Existing], oriented with South at the top [Forshungsbibliothek Gotha der Universit at Erfurt, MS orient. A 1507, fol.]